

17-06191

Azimuths to Grid North
 True North: -0.09°
 Magnetic North: -3.47°
 Magnetic Field
 Strength: 52378.25nT
 Dip Angle: 66.86°
 Date: 8/23/2013
 Model: IGRF2010

To convert Magnetic North to Grid, Subtract 8.47°
 To convert True North to Grid, Subtract 0.09°



SITE DETAILS: Ahouse / Callie Pad
 Site Center: Ahouse Unit 1H
 Site Centre Northing: 14249870.09
 Easting: 1682112.05
 Positional Uncertainty: 2.8
 Convergence: 0.09
 Local North: Grid

Genie Lightfoot
 10/29 April 28 2014
 Scientific Drilling
 421 South Eagle Lane
 Oklahoma City, OK 73128

Ahouse Unit 2H
 Doddridge County WV
 Northing: 14249862.98
 Easting: 1682105.18
 As Drilled

WELL DETAILS Ahouse Unit 2H
 Ground Level: 1005.0
 Northing Easting Longitude
 1682105.1889 -14° 29' 02.4" N 80° 51' 9.935" W

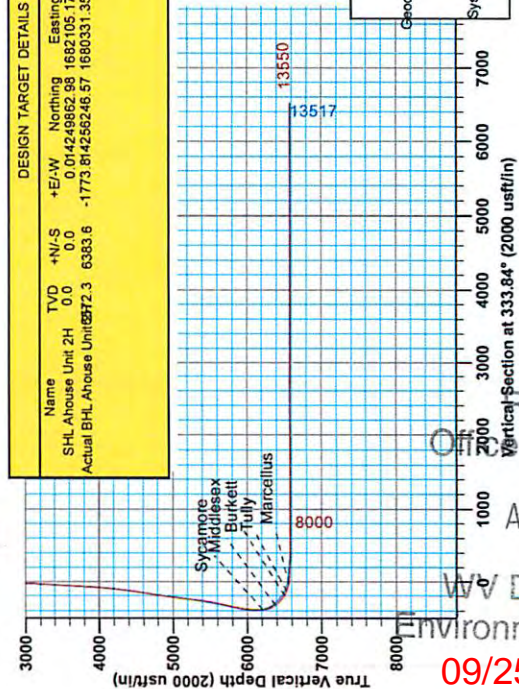
LEGEND

- Callie Unit 2H, Original Wellpath, As Drilled V0
- Callie Unit 1H, Original Wellpath, As Drilled V0
- Ahouse Unit 1H, Original Wellpath, As Drilled V0
- Ahouse Unit 2H, Original Wellpath, Plan 4 V0
- As Drilled

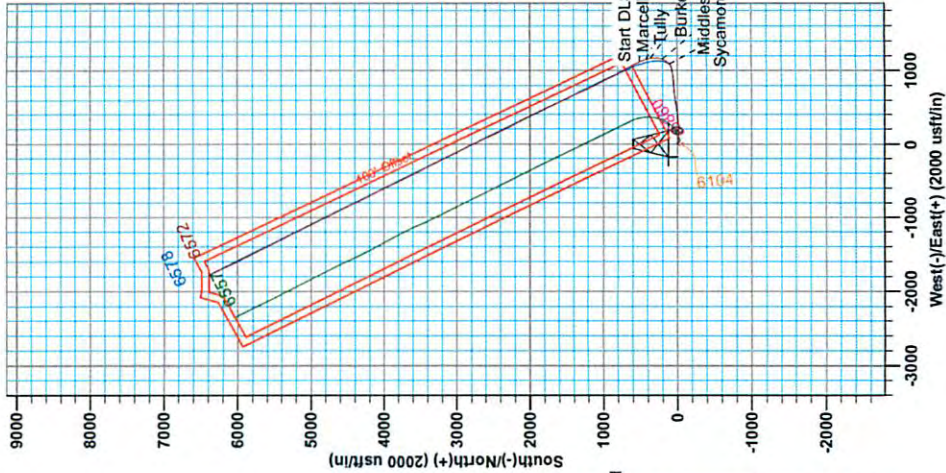
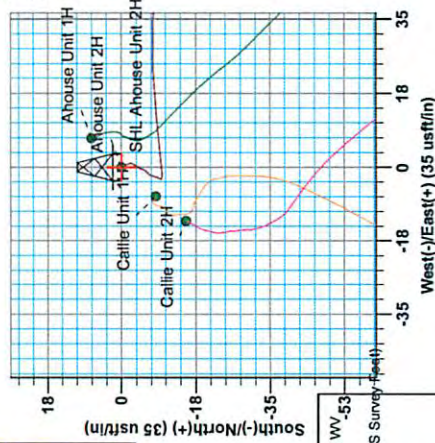
Precision 522: 1005 GL + 18 KB @ 1023 D.usft
 Gr: 1005.0

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Ahouse Unit 2H	0.0	0.0	0.0	0 014249862.98	1682105.18	14° 29' 02.4" N	80° 51' 9.935" W
Actual BHL Ahouse Unit	6572.3	6363.6	-1773.8	1682362.46	57 1686033.1	3589° 15' 32.172" N	80° 51' 32.363" W



PROJECT DETAILS: Doddridge County WV -53
 Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: Zone 17N (84 W to 76 W)
 System Datum: Mean Sea Level



RECEIVED
 Office of Oil and Gas
 AUG 03 2015
 WV Department of
 Environmental Protection
 09/25/2015

17-06191



Antero Resources

Doddridge County WV
Ahouse / Callie Pad
Ahouse Unit 2H
Original Wellpath

Design: As Drilled

EOW Completion Report

28 April, 2014

RECEIVED
Office of Oil and Gas



Scientific Drilling

AUG 03 2015
WV Department of
Environmental Protection

09/25/2015

17-06191



EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Ahouse Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 522: 1005' GL + 18' KB @ 1023.0usft
Site:	Ahouse / Callie Pad	MD Reference:	Precision 522: 1005' GL + 18' KB @ 1023.0usft
Well:	Ahouse Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Project	Doddridge County WV, McClellan District		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	Ahouse / Callie Pad				
Site Position:		Northing:	14,249,870.09 usft	Latitude:	39° 14' 29.095 N
From:	Map	Easting:	1,682,112.06 usft	Longitude:	80° 51' 9.848 W
Position Uncertainty:	2.8 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.09 °

Well	Ahouse Unit 2H					
Well Position	+N/-S	0.0 usft	Northing:	14,249,862.98 usft	Latitude:	39° 14' 29.024 N
	+E/-W	0.0 usft	Easting:	1,682,105.18 usft	Longitude:	80° 51' 9.935 W
Position Uncertainty	2.8 usft		Wellhead Elevation:	1,023.0 usft	Ground Level:	1,005.0 usft

Wellbore	Original Wellpath				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/23/2013	-8.38	66.86	52,378

Design	As Drilled				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
		0.0	0.0	0.0	333.84

Survey Program	Date 4/28/2014				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
105.0	6,190.0	Survey #4 Def Gyro to KOP (Original Wellbore)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper	
6,244.0	13,550.0	Survey #5 MWD (Original Wellpath)	MWD SDI	MWD - Standard ver 1.0.1	

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	
105.0	0.10	193.35	105.0	-0.1	0.0	-0.1	0.10	
205.0	0.24	164.60	205.0	-0.4	0.0	0.3	0.16	
305.0	0.31	123.23	305.0	-0.7	0.3	-0.8	0.21	
405.0	0.14	141.41	405.0	-1.0	0.6	0.7	0.18	
505.0	0.33	184.09	505.0	-1.4	0.7	-1.5	0.25	
605.0	0.33	134.24	605.0	-1.8	0.8	-2.0	0.28	
705.0	0.23	212.23	705.0	-2.2	0.9	-2.4	0.36	
805.0	0.33	181.28	805.0	-2.7	0.8	-2.8	0.18	
905.0	0.38	228.20	905.0	-3.2	0.6	-3.1	0.29	
1,005.0	0.46	202.08	1,005.0	-3.8	0.2	-3.5	0.21	

RECEIVED
Office of Oil and Gas
APR 03 2015
WV Department of Environmental Protection

17-06191



EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Ahouse Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 522: 1005' GL + 18' KB @ 1023.0usft
Site:	Ahouse / Callie Pad	MD Reference:	Precision 522: 1005' GL + 18' KB @ 1023.0usft
Well:	Ahouse Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	V. Sec (usft)	DLeg (°/100usft)		
1,105.0	0.21	239.77	1,105.0	-4.2	-0.1	-3.7	0.32		
1,205.0	0.24	188.34	1,205.0	-4.5	-0.3	-3.9	0.20		
1,305.0	0.33	206.60	1,305.0	-5.0	-0.5	-4.3	0.13		
1,405.0	0.15	182.25	1,405.0	-5.4	-0.6	-4.6	0.20		
1,505.0	0.37	232.21	1,505.0	-5.7	-0.9	-4.7	0.30		
1,605.0	0.37	221.08	1,605.0	-6.2	-1.3	-4.9	0.07		
1,705.0	0.21	226.14	1,705.0	-6.5	-1.7	-5.1	0.16		
1,805.0	0.19	184.77	1,805.0	-6.8	-1.8	-5.3	0.14		
1,905.0	0.49	198.82	1,905.0	-7.4	-2.0	-5.8	0.31		
2,005.0	0.33	224.83	2,005.0	-8.0	-2.3	-6.2	0.24		
2,105.0	0.21	121.78	2,105.0	-8.3	-2.4	-6.4	0.43		
2,205.0	0.12	223.23	2,205.0	-8.5	-2.3	-6.6	0.26		
2,305.0	0.13	224.44	2,305.0	-8.6	-2.4	-6.7	0.01		
2,405.0	0.28	216.93	2,405.0	-8.9	-2.7	-6.8	0.15		
2,505.0	0.38	188.77	2,505.0	-9.4	-2.9	-7.2	0.19		
2,605.0	1.27	81.91	2,605.0	-9.6	-1.8	-7.8	1.43		
2,705.0	3.77	85.15	2,704.9	-9.2	2.6	-9.4	2.50		
2,805.0	6.57	83.92	2,804.4	-8.3	11.5	-12.5	2.80		
2,905.0	6.66	87.64	2,903.8	-7.4	23.0	-16.8	0.44		
3,005.0	6.58	92.35	3,003.1	-7.4	34.5	-21.9	0.55		
3,105.0	6.49	92.09	3,102.5	-7.9	45.9	-27.3	0.09		
3,205.0	6.11	92.77	3,201.9	-8.3	56.9	-32.6	0.39		
3,305.0	5.90	90.32	3,301.3	-8.6	67.3	-37.4	0.33		
3,405.0	5.83	98.21	3,400.8	-9.4	77.5	-42.6	0.81		
3,505.0	5.79	99.90	3,500.3	-11.0	87.5	-48.4	0.18		
3,605.0	5.77	97.52	3,599.8	-12.5	97.4	-54.2	0.24		
3,705.0	5.73	96.86	3,699.3	-13.8	107.4	-59.7	0.08		
3,805.0	5.81	97.53	3,798.8	-15.0	117.3	-65.2	0.10		
3,905.0	7.28	92.12	3,898.1	-15.9	128.7	-71.0	1.59		
4,005.0	10.06	89.40	3,996.9	-16.1	143.8	-77.8	2.81		
4,105.0	11.71	90.34	4,095.1	-16.0	162.6	-86.1	1.66		
4,205.0	14.01	88.81	4,192.6	-15.8	184.9	-95.7	2.32		
4,305.0	16.35	88.60	4,289.1	-15.2	211.1	-106.7	2.34		
4,405.0	19.59	85.15	4,384.2	-13.5	241.9	-118.7	3.41		
4,505.0	22.03	83.66	4,477.7	-10.0	277.2	-131.2	2.50		
4,605.0	23.65	83.36	4,569.9	-5.6	315.8	-144.2	1.62		
4,705.0	24.05	84.12	4,661.3	-1.2	356.0	-158.0	0.50		
4,805.0	23.99	85.55	4,752.7	2.5	396.5	-172.6	0.59		
4,905.0	25.44	84.22	4,843.5	6.2	438.1	-187.6	1.55		
5,005.0	26.22	82.71	4,933.5	11.2	481.4	-202.2	1.02		
5,105.0	26.67	80.52	5,023.1	17.7	525.5	-215.8	1.07		
5,205.0	25.39	79.92	5,112.9	25.1	568.7	-228.2	1.31		
5,305.0	25.35	80.60	5,203.3	32.4	610.9	-240.3	0.29		
5,405.0	25.04	82.91	5,293.8	38.5	653.1	-253.4	1.03		

RECEIVED
Office of Oil and Gas
AUG 03 2015
WV Department of Environmental Protection

17-06191



EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Ahouse Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 522: 1005' GL + 18' KB @ 1023.0usft
Site:	Ahouse / Callie Pad	MD Reference:	Precision 522: 1005' GL + 18' KB @ 1023.0usft
Well:	Ahouse Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,505.0	25.69	85.07	5,384.1	43.0	695.7	-268.1	1.13
5,605.0	25.07	84.67	5,474.5	46.8	738.4	-283.5	0.64
5,705.0	25.04	84.86	5,565.1	50.7	780.5	-298.6	0.09
5,805.0	26.78	87.25	5,655.0	53.6	824.1	-315.2	2.03
5,905.0	27.01	86.78	5,744.2	56.0	869.3	-333.0	0.31
6,005.0	27.15	82.77	5,833.2	60.1	914.6	-349.2	1.83
6,105.0	27.00	80.55	5,922.3	66.7	959.6	-363.2	1.02
6,190.0	26.41	80.07	5,998.2	73.2	997.3	-374.0	0.74
6,244.0	25.93	78.04	6,046.7	77.7	1,020.7	-380.3	1.88
6,275.0	25.37	75.87	6,074.6	80.7	1,033.7	-383.3	3.53
6,306.0	24.47	70.34	6,102.7	84.5	1,046.2	-385.4	8.05
6,337.0	24.01	64.63	6,131.0	89.4	1,058.0	-386.2	7.70
6,367.0	24.36	59.47	6,158.4	95.1	1,068.8	-385.8	7.14
6,398.0	25.62	54.69	6,186.5	102.2	1,079.8	-384.3	7.68
6,421.0	26.41	51.77	6,207.2	108.3	1,087.9	-382.4	6.55
Sycamore							
6,430.0	26.74	50.67	6,215.2	110.8	1,091.0	-381.5	6.55
6,460.0	28.59	47.09	6,241.8	120.0	1,101.5	-377.9	8.29
6,491.0	31.55	42.54	6,268.6	131.0	1,112.4	-372.9	12.05
6,522.0	34.37	36.68	6,294.6	144.0	1,123.1	-365.9	13.72
6,553.0	37.10	32.76	6,319.8	158.9	1,133.4	-357.1	11.49
6,584.0	39.72	26.96	6,344.1	175.6	1,143.0	-346.3	14.36
6,615.0	42.66	23.12	6,367.4	194.1	1,151.6	-333.5	12.51
6,630.0	44.05	20.87	6,378.3	203.6	1,155.4	-326.6	13.86
Middlesex							
6,646.0	45.58	18.59	6,389.7	214.2	1,159.2	-318.8	13.86
6,677.0	48.13	12.85	6,410.9	236.0	1,165.3	-301.9	15.81
6,707.0	50.08	7.17	6,430.5	258.3	1,169.3	-283.6	15.71
6,738.0	52.76	2.47	6,449.9	282.5	1,171.3	-262.9	14.67
6,769.0	55.37	358.36	6,468.1	307.5	1,171.4	-240.4	13.64
6,800.0	58.30	354.86	6,485.0	333.4	1,169.9	-216.5	13.36
6,831.0	61.89	352.15	6,500.5	360.1	1,166.8	-191.2	13.84
6,834.0	62.27	351.81	6,501.9	362.7	1,166.5	-188.7	16.07
Burkett							
6,862.0	65.84	348.77	6,514.1	387.6	1,162.2	-164.5	16.07
6,893.0	68.63	345.19	6,526.1	415.4	1,155.8	-136.7	13.94
6,901.0	68.98	344.27	6,529.0	422.6	1,153.8	-129.4	11.53
Tully							
6,923.0	69.95	341.77	6,536.7	442.3	1,147.8	-109.1	11.53
6,954.0	72.39	336.65	6,546.7	469.7	1,137.4	-79.9	17.50
6,985.0	76.14	334.22	6,555.2	496.8	1,125.0	-50.0	14.26
7,004.0	78.70	333.68	6,559.3	513.5	1,116.8	-31.5	13.73
Marcellus							
7,016.0	80.31	333.35	6,561.5	524.1	1,111.6	-19.7	13.73
7,047.0	83.67	332.23	6,565.8	551.3	1,097.5	-11.0	11.41

RECEIVED
Office of Oil and Gas
AUG 03 2015
WV Department of Environmental Protection

17-06191



EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Ahouse Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 522: 1005' GL + 18' KB @ 1023.0usft
Site:	Ahouse / Callie Pad	MD Reference:	Precision 522: 1005' GL + 18' KB @ 1023.0usft
Well:	Ahouse Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
7,078.0	85.60	333.12	6,568.7	578.8	1,083.4	41.9	6.85
7,109.0	85.91	332.81	6,571.0	606.3	1,069.3	72.8	1.41
7,202.0	88.46	331.32	6,575.6	688.4	1,025.8	165.6	3.17
7,294.0	90.04	331.23	6,576.8	769.0	981.6	257.5	1.72
7,387.0	90.48	331.75	6,576.3	850.7	937.2	350.4	0.73
7,479.0	89.60	333.51	6,576.3	932.4	894.9	442.4	2.14
7,572.0	89.60	333.55	6,576.9	1,015.7	853.5	535.4	0.04
7,665.0	88.81	332.90	6,578.2	1,098.7	811.6	628.4	1.10
7,757.0	88.90	332.72	6,580.1	1,180.5	769.5	720.3	0.22
7,850.0	90.40	336.59	6,580.6	1,264.6	729.7	813.3	4.46
7,942.0	90.48	335.62	6,579.9	1,348.7	692.5	905.2	1.06
8,035.0	90.57	334.39	6,579.1	1,433.0	653.2	998.2	1.33
8,128.0	89.78	334.57	6,578.8	1,516.9	613.1	1,091.2	0.87
8,220.0	89.78	334.13	6,579.1	1,599.8	573.3	1,183.2	0.48
8,313.0	90.31	334.57	6,579.1	1,683.7	533.0	1,276.2	0.74
8,405.0	90.40	335.89	6,578.5	1,767.2	494.5	1,368.2	1.44
8,498.0	89.60	334.22	6,578.5	1,851.5	455.3	1,461.1	1.99
8,590.0	89.69	335.80	6,579.1	1,934.9	416.4	1,553.1	1.72
8,683.0	89.43	332.81	6,579.8	2,018.7	376.1	1,646.1	3.23
8,776.0	89.78	331.05	6,580.4	2,100.7	332.3	1,739.0	1.93
8,868.0	90.40	330.00	6,580.3	2,180.8	287.1	1,830.9	1.33
8,961.0	90.54	331.04	6,579.5	2,261.8	241.3	1,923.7	1.13
9,056.0	89.52	333.60	6,579.5	2,345.9	197.2	2,018.7	2.90
9,150.0	88.99	335.01	6,580.7	2,430.6	156.4	2,112.7	1.60
9,244.0	89.52	335.62	6,581.9	2,516.0	117.2	2,206.6	0.86
9,338.0	90.48	336.15	6,581.9	2,601.8	78.8	2,300.6	1.17
9,433.0	89.78	335.97	6,581.7	2,688.6	40.2	2,395.5	0.76
9,528.0	90.13	334.22	6,581.8	2,774.8	0.2	2,490.5	1.88
9,623.0	90.57	332.99	6,581.2	2,859.9	-42.0	2,585.5	1.38
9,717.0	90.31	332.99	6,580.5	2,943.6	-84.7	2,679.4	0.28
9,812.0	90.31	332.28	6,579.9	3,028.0	-128.4	2,774.4	0.75
9,907.0	89.96	333.78	6,579.7	3,112.7	-171.5	2,869.4	1.62
10,002.0	90.92	333.60	6,579.0	3,197.8	-213.6	2,964.4	1.03
10,094.0	89.78	332.99	6,578.4	3,280.0	-254.9	3,056.4	1.41
10,187.0	89.25	333.25	6,579.2	3,362.9	-297.0	3,149.4	0.63
10,280.0	90.13	332.46	6,579.7	3,445.7	-339.4	3,242.4	1.27
10,372.0	89.43	333.60	6,580.1	3,527.7	-381.1	3,334.4	1.45
10,465.0	90.48	333.25	6,580.1	3,610.9	-422.7	3,427.4	1.19
10,557.0	89.34	333.60	6,580.3	3,693.1	-463.9	3,519.3	1.30
10,650.0	90.92	335.62	6,580.1	3,777.1	-503.8	3,612.3	2.76
10,742.0	92.07	335.36	6,577.7	3,860.8	-541.9	3,704.3	1.28
10,835.0	90.92	334.48	6,575.3	3,945.0	-581.3	3,797.2	1.56
10,927.0	89.43	333.51	6,575.0	4,027.7	-621.6	3,889.2	1.93
11,020.0	89.52	333.42	6,575.8	4,110.9	-663.2	3,982.2	0.14
11,113.0	90.31	332.99	6,576.0	4,193.9	-705.1	4,075.2	0.67

RECEIVED
Office of Oil and Gas
AUG 03 2015
West Virginia Department of Environmental Protection

17-06191



EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Ahouse Unit 2H
Project:	Doddridge County WV	TVD Reference:	Precision 522: 1005' GL + 18' KB @ 1023.0usft
Site:	Ahouse / Callie Pad	MD Reference:	Precision 522: 1005' GL + 18' KB @ 1023.0usft
Well:	Ahouse Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
11,205.0	90.40	332.63	6,575.4	4,275.8	-747.2	4,167.2	0.40
11,298.0	89.96	333.69	6,575.1	4,358.7	-789.1	4,260.2	1.23
11,390.0	90.98	334.73	6,574.3	4,441.6	-829.2	4,352.2	1.58
11,483.0	89.60	334.22	6,573.9	4,525.5	-869.2	4,445.2	1.58
11,576.0	89.78	333.78	6,574.4	4,609.1	-910.0	4,538.1	0.51
11,668.0	90.57	334.38	6,574.1	4,691.8	-950.2	4,630.1	1.08
11,761.0	89.43	334.04	6,574.1	4,775.5	-990.7	4,723.1	1.28
11,853.0	90.84	333.86	6,573.9	4,858.2	-1,031.1	4,815.1	1.55
11,946.0	89.87	335.01	6,573.3	4,942.1	-1,071.2	4,908.1	1.62
12,038.0	89.60	333.95	6,573.7	5,025.1	-1,110.8	5,000.1	1.19
12,131.0	90.31	333.34	6,573.8	5,108.4	-1,152.1	5,093.1	1.01
12,224.0	89.69	332.90	6,573.8	5,191.4	-1,194.2	5,186.1	0.82
12,316.0	90.48	332.55	6,573.7	5,273.2	-1,236.3	5,278.1	0.94
12,409.0	90.66	332.90	6,572.7	5,355.8	-1,279.0	5,371.1	0.42
12,501.0	89.60	334.22	6,572.5	5,438.2	-1,319.9	5,463.1	1.84
12,594.0	90.22	333.69	6,572.7	5,521.8	-1,360.8	5,556.1	0.88
12,687.0	89.34	333.78	6,573.0	5,605.1	-1,401.9	5,649.1	0.95
12,779.0	89.34	334.30	6,574.1	5,687.9	-1,442.2	5,741.1	0.57
12,872.0	90.22	333.51	6,574.4	5,771.4	-1,483.1	5,834.1	1.27
12,965.0	91.28	332.63	6,573.2	5,854.3	-1,525.2	5,927.0	1.48
13,057.0	89.36	333.09	6,572.7	5,936.1	-1,567.2	6,019.0	2.15
13,150.0	88.72	334.13	6,574.3	6,019.4	-1,608.5	6,112.0	1.31
13,242.0	89.25	335.89	6,575.9	6,102.8	-1,647.4	6,204.0	2.00
13,335.0	90.13	335.71	6,576.4	6,187.6	-1,685.5	6,296.9	0.97
13,427.0	91.01	335.45	6,575.5	6,271.4	-1,723.5	6,388.9	1.00
13,486.0	91.63	335.97	6,574.1	6,325.2	-1,747.8	6,447.8	1.37
13,550.0	91.63	335.97	6,572.3	6,383.6	-1,773.8	6,511.7	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,421.0	6,207.2	108.3	1,087.9	Sycamore
6,630.0	6,378.3	203.6	1,155.4	Middlesex
6,834.0	6,501.9	362.7	1,166.5	Burkett
6,901.0	6,529.0	422.6	1,153.8	Tully
7,004.0	6,559.3	513.5	1,116.8	Marcellus

RECEIVED
Office of Oil and Gas

AUG 03 2015

Checked By: _____ Approved By: _____ Date: _____

WV Department of Environmental Protection